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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,047	12/29/2000	Suk H. Cho	09143-012001	8973

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EXAMINER

KUMAR, PREETI

ART UNIT PAPER NUMBER

1751

DATE MAILED: 09/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/751,047

Applicant(s)

CHO ET AL.

Examiner

Preeti Kumar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 56-78 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 56-78 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 15.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Non-Final Rejection

1. Claims 56-78 are pending.
2. The rejection of claims 56-60 and 63-78 rejected under 35 U.S.C. 103(a) as being unpatentable over Ospinal et al. (US 5,965,508) in view of Sherry et al. (US 5,962,388) is withdrawn in light of applicant's arguments and declaration submitted in paper no. 16.
3. The rejection of claims 61 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ospinal et al. (US 5,965,508) as applied to claims 56-60 and 63-78 above, and further in view of Gray et al. (US 5,269,960) is withdrawn in light of applicant's arguments and declaration submitted in paper no. 16.

Response to Arguments

4. Applicant's arguments, see paper no.19, filed July 28, 2003, with respect to the rejection(s) of claim(s) 56-78 under Ospinal et al. have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Marshall et al. (US 5,691,292).

New Grounds of Rejection

Claim Objections

5. Claim 58 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of previous claim 56. Applicant is

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required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim Rejections - 35 USC § 103

6. Claims 56-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marshall et al. (US 5,691,292), and further in view of Ospinal et al. (US 5,965,508).

Regarding claim 57, Marshall et al. teach a liquid automatic dishwashing detergent composition substantially free of chlorine bleach, containing 0.001% to about 5% of active protease or amylase enzymes and having a pH between about 7 and about 11. See abstract col.2, ln.60-66.

Marshall et al. teach suitable proteolytic enzymes include Alcase,TM EsperaseTM, SavinaseTM, Maxatase, Maxacal and Maxapem. See col.3, ln.10-13. Note that, with respect to the activities of the enzymes, as recited by the instant claims 59-62, the Examiner asserts that the broad teachings of Marshall et al. would encompass compositions comprising the same enzymes, having the same activities as recited by the instant claims since Marshall et al. teach compositions containing the same components in the same proportions as recited by the instant claims.

Note that, with respect to the performance in the standard wash test, as recited by the instant claims 66-73, the Examiner asserts that the broad teachings of Marshall et al. would encompass compositions having the same performance values as recited by the instant claims since Marshall et al. teach tableware cleaning compositions containing the same components in the same proportions as recited by the instant claims.

Marshall et al. teach a thixotropic thickening agent present in the composition from about 0.1% to about 10% by weight of the detergent composition. See col.4, ln.20-25. Marshall et al. teach the preferred cross-linked polycarboxylate polymer is preferably a carboxyvinyl polymer. See col.4, ln.33-34. Other types of thickeners disclosed by Marshall et al. are natural gums, such as xanthan gum, and the like. See col.5, ln.30-31. Marshall et al teach that a composition can contain from about 0.01% to about 40% of a detergent surfactant which results in a low foaming detergent composition. See col.8, ln.50-55. In column 9, Marshall et al. teach the various examples of nonionic surfactants, including, polyethylene glycols or polypropylene glycols have a molecular weight of from about 1,400 to about 30,000 Daltons. See col.9, ln. 1-50. Regarding claim 77, Marshall et al. teach an enzyme stabilizing system utilizing calcium from about 0.001% to about 10% or boric acid from about 0.05% to about 7% by weight. See col.6 ln.11-65. Regarding claims 58 and 64, Marshall et al. teach that detergency builders such as citrate builders can be added in levels from about 0.01% to about 40% by weight of the composition. See col.11, ln.30-50.

Regarding claim 63, Marshall et al. teach the use of detergency builders and organic dispersants, such as polyacrylates or acrylate-containing copolymers at levels of 0 to about 20% and having a molecular weight from about 1,000 to about 500,000 Daltons. See col.12, ln.1-40.

Marshall et al. do not specifically teach a liquid automatic dishwashing detergent comprising at least one detergent enzyme and having a pH value less than 7.0 in addition to the other requisite components of the composition as recited by the instant

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claims. However, Marshall et al. provide motivation to lower the pH of the detergent composition by teaching that a lower product pH results in a composition which is safer to dishwasher articles (i.e. china, silverware, glass, and the like). See col.1, ln.49-52.

Ospinal et al. teach compositions that may be used to produce a transparent dish washing gel, paste or solution, or further applications such as are apparent to one skilled in the art. See col.7, ln.55-65.

Specifically regarding claims 74-76, Ospinal et al. teach that the soap compositions will preferably be formulated such that they will have a pH of between about 4.0 and about 10.0, more preferably between about 5 and about 9.5. Techniques for controlling pH at recommended usage levels include the use of buffers, alkali, acids, etc., and are well known to those skilled in the art. See col.9, ln.44-49.

Specifically regarding claims 56 and 64, Ospinal et al. teach ingredients for use in the compositions include detergent builders, cellulase enzymes, softening clays, smectite-type softening clays, polymeric clays, flocculating agents, dye transfer inhibitors, and optical brighteners. See col.14, ln.25-32. Optional pH adjusting agents are may be citric acid. See col.13, ln.19.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to formulate a liquid automatic dishwashing detergent comprising at least one detergent enzyme and having a pH value less than about 6.8 in addition to the other requisite components of the composition, with a reasonable expectation of success, because Marshall et al. suggest a liquid automatic dishwashing detergent comprising atleast one detergent enzyme and having a pH value about 7.0 in addition to

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the other requisite components of the composition and furthermore, Marshall et al. provide motivation to lower the pH of the detergent composition for additional dishwasher article safety.

Also, it would have been obvious, to one of ordinary skill in the art, at the time the invention was made, to formulate a liquid dishwashing detergent having a pH value less than about 6.8 and further comprising the other requisite components of the detergent composition in the specific proportions as recited by the instant claims, with a reasonable expectation of success, because the broad teachings of Marshall et al. in combination with Ospinal et al. suggest a liquid detergent composition formulated in such a manner as to have a pH of less than 6.8 and comprising protease enzyme and xanthan gum and the other requisite components of the detergent composition in the same proportions as recited by the instant claims and furthermore, Marshall et al. provide motivation to lower the pH of the detergent composition for additional dishwasher article safety.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Remaining references cited but not relied upon are considered to be cumulative to or less pertinent than those relied upon or discussed above.

8. Applicant is reminded that any evidence to be presented in accordance with 37 CFR 1.131 or 1.132 should be submitted before final rejection in order to be considered timely.

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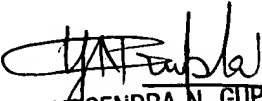
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Preeti Kumar whose telephone number is 703-305-0178. The examiner can normally be reached on M-F 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on 703-308-4708. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Preeti Kumar
Examiner
Art Unit 1751

PK
August 22, 2003


YOGENDRA N. GUPTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700